abcam

ab181598

Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker

Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) is a rabbit monoclonal antibody detecting Cytokeratin 7 in **Western Blot, Flow Cytometry (Intra), IHC-P, IHC-Fr, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 110 publications

Lab Essentials | Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR17078
Purification technique	Affinity purification Protein A
Concentration	1.342 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	1/8000
Notes	-

Expected

Species	Rat, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/1500
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/8000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/8000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/8000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information KRT7

Function	Blocks interferon-dependent interphase and stimulates DNA synthesis in cells. Involved in the translational regulation of the human papillomavirus type 16 E7 mRNA (HPV16 E7).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) was developed by Abcam using patented rabbit monoclonal antibody technology and is validated for use in Flow Cyt (Intra), ICC/IF, IHC-Fr, IHC-P and WB.

Abcam's high quality manufacturing and validation processes ensure Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.

The specificity of Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) has been confirmed by Western Blot testing in Cytokeratin 7 knockout A549 cells.

Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) has 10 independent reviews from customers.

Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) specifically detects Cytokeratin 7 (UniProt ID: Q9DCV7; Molecular weight: 51kDa) and is sold in 100 µL and 1 mL selling sizes.

Conjugation-ready, carrier free format available for antibody clone EPR17078 - ab220804.

Antibody clone EPR17078 is also available pre-conjugated to a variety of labels for your convenience - Alexa Fluor® 488, Alexa Fluor® 647, Alexa Fluor® 594, Alexa Fluor® 555, HRP, PE (ab208273, ab209599, ab209600, ab209601, ab209945, ab213193).

Cytokeratin 7 (CK7) is a protein expressed in the epithelial cells of various organs, including the lungs, breast and female reproductive organs. It is used as a diagnostic marker to differentiate between types of carcinomas, such as distinguishing ovarian and gastrointestinal carcinomas and to predict the progression of certain cancers.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

14 product images

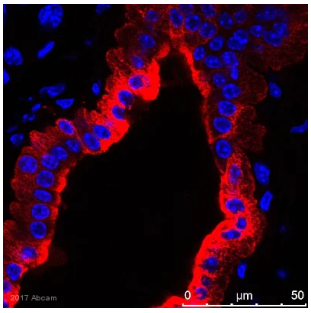
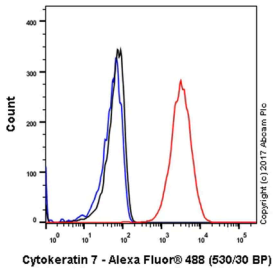


Image courtesy of Dr. Isabelle Miletich

Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Cytokeratin 7 Immunohistochemistry (Frozen sections) staining using rabbit Anti-Cytokeratin 7 antibody

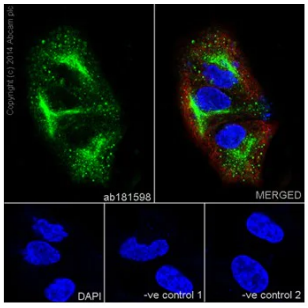
Immunohistochemical analysis of formaldehyde-fixed, frozen section of mouse salivary gland tissue labeling Cytokeratin 7 with ab181598 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG AlexaFluor®660.



Flow Cytometry (Intracellular) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Cytokeratin 7 Flow Cytometry (Intracellular) staining using rabbit Anti-Cytokeratin 7 antibody

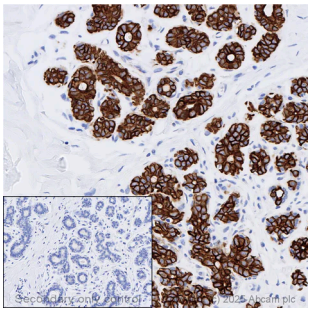
Intracellular Flow Cytometry analysis of A549 (human lung carcinoma) cells labeling Cytokeratin 7 (red) with ab181598 at a 1/1500 dilution. Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (ab172730). Blue (unlabeled control) - Cells without incubation with primary and secondary antibodies.



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Cytokeratin 7 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 7 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 A549 (Human lung carcinoma) cells labeling Cytokeratin 7 with ab181598 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/400 dilution (green). Cytoplasmic staining on A549 cell line is observed. The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/500 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).
The negative controls are as follows;
1. ab181598 at 1/100 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
2. ab7291 (anti-Tubulin mouse mAb) at 1/500 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/400 dilution.

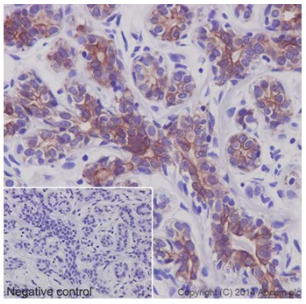


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Cytokeratin 7 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human breast using rabbit Anti-Cytokeratin 7 antibody

Immunohistochemical analysis of formalin fixed paraffin embedded human breast labelling cytokeratin 7 with ab181598 at a concentration of 0.1µg/ml. The immunostaining was performed on a Ventana DISCOVERY ULTRA (Roche Tissue Diagnostics) instrument with a ChromoMap DAB kit and anti-rabbit HQ and anti-HQ HRP detection. Heat mediated antigen retrieval was performed with DISCOVERY cell conditioning solution (CC1) 100°C, pH8.5 for 32mins. ab181598 anti-

Cytokeratin 7 antibody [EPR17078] was incubated for 16mins at 37°C. Sections were counterstained with Hematoxylin II. Image inset shows absence of staining in secondary antibody only control.
Customers are encouraged to optimise antigen retrieval conditions, antibody concentration, incubation times and temperature for best results in their own IHC assay workflow (automated and manual)

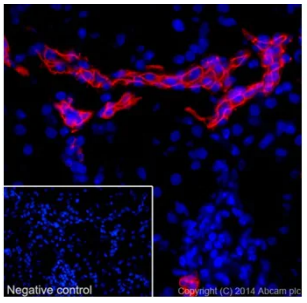


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Cytokeratin 7 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 7 antibody

Immunohistochemical analysis of paraffin-embedded Human mammary gland tissue labeling Cytokeratin 7 with ab181598 at 1/8000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ab97051 at 1/500 dilution. Membrane and cytoplasmic staining on epithelial cells of breast tissues is observed. Counter stained with Hematoxylin.
Negative control: Using PBS instead of primary antibody.

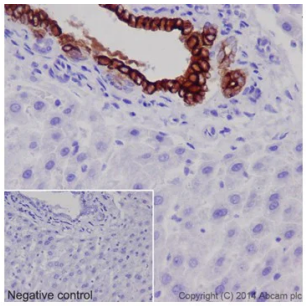
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Cytokeratin 7 Immunohistochemistry (Frozen sections) staining using rabbit Anti-Cytokeratin 7 antibody

Immunohistochemical analysis of frozen Mouse kidney tissue labeling Cytokeratin 7 with ab181598 at 1/8000 dilution, followed by Donkey anti-rabbit Alexa Fluor 594 at 1/1000 dilution. Cytoplasmic staining on collecting tube is observed. This data is from our collaborator Dr. Hai Song's lab (Life Sciences Institute Zhejiang University). Counter stained with DAPI.
Negative control: Using PBS instead of primary antibody.

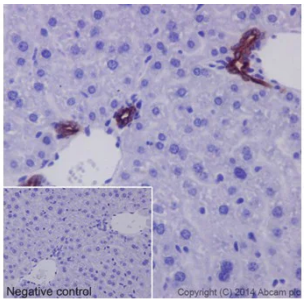


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Cytokeratin 7 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 7 antibody

Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling Cytokeratin 7 with ab181598 at 1/8000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ab97051 at 1/500 dilution. On rat liver, only bile duct epithelia are positive, no reaction in hepatocytes is observed. Counter stained with Hematoxylin.
Negative control: Using PBS instead of primary antibody.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

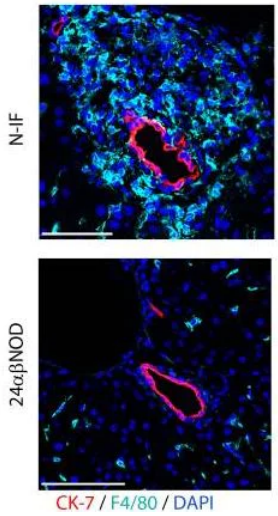


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Cytokeratin 7 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 7 antibody

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Cytokeratin 7 with ab181598 at 1/8000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ab97051 at 1/500 dilution. On mouse liver, only bile duct epithelia are positive, no reaction in hepatocytes is observed. Counter stained with Hematoxylin.
Negative control: Using PBS instead of primary antibody.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



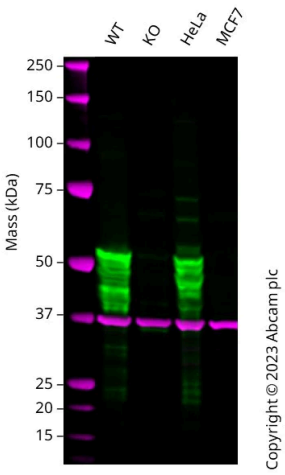
Fransen-Pettersson, N. et al PLoS One. 2016 Jul 21;11(7):e0159850. doi: 10.1371/journal.pone.0159850. eCollection 2016
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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Hepatic inflammation and abnormal intrahepatic bile ducts in the N-IF mouse
Immunofluorescence staining of bile ducts (CK-7, red), macrophages (F4/80, light blue) and nuclei (DAPI, blue) in livers of 8 week old N-IF and 24αβNOD control mice. Representative images from two independent experiments with a total of six mice are shown. Scale bars are 100 μm.

Cytokeratin is detected with ab181598 at1/1500 dilution in formalin-fixed, paraffin-embedded mouse liver tissue. The secondary antibody is an Anti-Rabbit AlexaFluor®594 conjugate (red).

(From Figure 1D of Fransen-Pettersson, N. et al)



Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Cytokeratin 7 Western blot staining using rabbit Anti-Cytokeratin 7 antibody

Western blot: Anti-KRT7 antibody [EPR17078] (ab181598) staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (ab8245) loading control staining at 1/20000 dilution, shown in magenta. In Western blot, ab181598 was shown to bind specifically to KRT7. A band was observed at 40-55 kDa in wild-type A549 cell lysates with no signal observed at this size in KRT7 knockout cell line. To generate this image, wild-type and KRT7 knockout A549 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3% milk in TBS-0.1% Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.
All lanes:
Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) at 1/10000 dilution

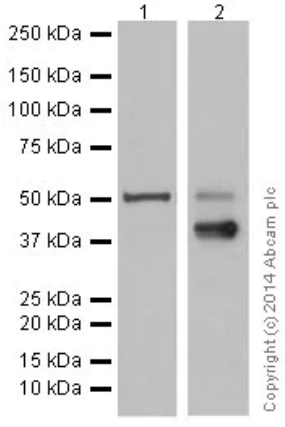
Lane 1:
Wild-type A549 cell lysate at 20 µg

Lane 2:
KRT7 knockout A549 cell lysate at 20 µg

Lane 3:
HeLa cell lysate at 20 µg

Lane 4:
MCF7 cell lysate at 20 µg

Observed band size: 40-55 kDa



Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Cytokeratin 7 Western blot staining using rabbit Anti-Cytokeratin 7 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.

~45 and 42kDa bands are supported by the literature and competitor's products, which may be the isoforms.

All lanes:
Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) at 1/20000 dilution

Lane 1:
HeLa (Human epithelial cells from cervix adenocarcinoma) cell lysate at 20 µg

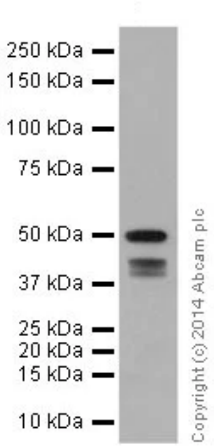
Lane 2:
Rat kidney tissue lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

Predicted band size: 51 kDa

Observed band size: 42 kDa, 45 kDa, 51 kDa



Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

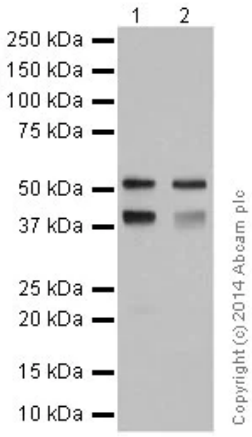
~45 and 42kDa bands are supported by the literature and competitor's products, which may be the isoforms.
All lanes:
Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) at 1/1000 dilution

All lanes:
Mouse liver lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

Predicted band size: 51 kDa



Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Blocking/Dilution buffer: 5% NFDM/TBST.

~45 and 42kDa bands are supported by the literature and competitor's products, which may be the isoforms.

All lanes:
Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) at 1/50000 dilution

Lane 1:
Rat bladder tissue at 10 µg

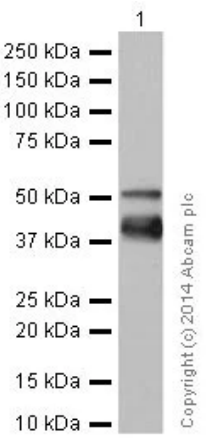
Lane 2:
Mouse lung tissue at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

Predicted band size: 51 kDa

Observed band size: 42 kDa, 52 kDa



Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

~45 and 42kDa bands are supported by the literature and competitor's products, which may be the isoforms.
All lanes:
Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) at 1/5000 dilution

All lanes:
Mouse kidney lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

Predicted band size: 51 kDa

Observed band size: 42 kDa, 45 kDa, 51 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.